


FORM PTO-1399 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NO. PHN 17,710
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		U.S. Application No. (if known, see 37 CFR 1.5) 09/869711
INTERNATIONAL APPLICATION NO. PCT/EP/00/11005	INTERNATIONAL FILING DATE NOVEMBER 6, 2000	PRIORITY DATE CLAIMED NOVEMBER 6, 2000
TITLE OF INVENTION OUTER LAYER AND ELEMENT WITH MARKINGS, AND METHOD OF MANUFACTURING SAME		
APPLICANT(S) FOR DO/EO/US KENG KIT YEO		
<p>Applicant(s) herewith submit to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1). <input type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2)) <ol style="list-style-type: none"> <input checked="" type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). <input type="checkbox"/> has been transmitted by the International Bureau. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US). <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)) <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) <ol style="list-style-type: none"> <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau). <input type="checkbox"/> have been transmitted by the International Bureau. <input checked="" type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired. <input type="checkbox"/> have not been made and will not be made. <input type="checkbox"/> A translation of the amendment to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)). <input checked="" type="checkbox"/> An executed oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)). <p>Items 11. to 16. below concern document(s) or information included:</p> <ol style="list-style-type: none"> <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included. <input type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND OR SUBSEQUENT preliminary amendment. <input type="checkbox"/> A substitute specification. <input type="checkbox"/> A change of power of attorney and/or address letter. <input checked="" type="checkbox"/> Other items or information: 		
<p>CERTIFICATE OF EXPRESS MAILING</p> <p>Express Mail Mailing Label No. <u>EL 686 948 705</u></p> <p>Date of Deposit <u>07/02/2001</u></p> <p>I hereby certify that this paper and/or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231.</p> <p><u>G. Lamprecht</u> Name <u>G. Lamprecht</u> Signature</p>		

U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5) 09/869711		INTERNATIONAL APPLICATION NO. PCT/EP00/11005	ATTORNEY'S DOCKET NUMBER PHN 17.710
17 [] The following fees are submitted: BASIC NATIONAL FEE (37 C.F.R. 1.492(A)(1)-(5)): a 1 International preliminary-examination fee paid to USPTO (37 C.F.R. 1.482) \$690.00 a 2 No international preliminary examination fee paid to USPTO (37 C.F.R. 1.482) but international search fee paid to USPTO (37 C.F.R. 1.445(a)(2)) \$710.00 a 3 Neither international preliminary examination fee (37 C.F.R. 1.482) nor international search fee (37 C.F.R. 1.445(a)(2)) paid to USPTO \$1000.00 a 4 International preliminary examination fee paid to USPTO (37 C.F.R. 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) \$100.00 a 5 Search Report has been prepared by the EPO or JPO \$860.00 ENTER APPROPRIATE BASIC FEE AMOUNT = \$690.00			CALCULATIONS (PTO USE ONLY)
Surcharge of \$130.00 for furnishing the oath or declaration later than [] 20 [] 30 months from the earliest claimed priority date (37 C.F.R. 1.492(e)).			\$
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE
Total Claims	23 - 20 =	3	X \$ 18.00 \$54.00
Independent claims	1 - 3 =		X \$ 80.00 \$
MULTIPLE DEPENDENT CLAIMS (if applicable)			+ \$270.00 \$ 270.00
TOTAL OF ABOVE CALCULATIONS =			\$1014.00
Reductions by 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 C.F.R. 1.9, 1.21, 1.28)			\$
SUBTOTAL =			\$1014.00
Processing fee of \$130.00 for furnishing the English translation later than [] 20 [] 30 months from the earliest claimed priority date (37 C.F.R. 1.492(f)).			\$
TOTAL NATIONAL FEE =			\$1014.00
Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property +			\$40.00
TOTAL FEES ENCLOSED =			\$1054.00
			Amount to be refunded \$
			charged \$1054.00
a. [] A check in the amount \$_____ to cover the above fees is enclosed. b. [X] Please charge my Deposit Account No. 14-1270 in the amount of \$1054.00 to cover the above fees. A duplicate copy of this sheet is enclosed. c. [X] The Commissioner is hereby authorized to charge any additional fee, with the exception of the Base Issue Fee, which may be required, or credit any overpayment to Deposit Account No. 14-1270. A duplicate copy of this sheet is enclosed.			
NOTE: Where an appropriate time limit under 37 C.F.R. 1.494 or 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b)) must be filed and granted to restore the application to pending status.			
SEND ALL CORRESPONDENCE TO:			
Corporate Patent Counsel Philips Electronics North America Corporation 560 White Plains Road Tarrytown, NY 10591			
 (SIGNATURE)			MICHAEL E. MARION (NAME)
			32-265 (REGISTRATION NUMBER)

Outer layer and element with markings, and method of manufacturing same

The invention relates to an outer layer comprising a polymer material with certain visual properties and to an element having such an outer layer.

- 5 An example of an element having such an outer layer and designed for consumer products is known from US patent 5,592,766. This element is constructed as a sole plate of an electric iron. The outer layer is particularly suitable for such an application because it has very good sliding properties during ironing, a high resistance to scratching, can be easily cleaned, can be provided in a simple manner and at low cost against the soleplate, is well
- 10 resistant to corrosion, and is resistant to fast temperature changes up to 300 °C. Examples of alternative applications in elements for consumer products, where a layer of polymer material with an inorganic main chain is particularly suitable on account of at least a number of the above properties, are surfaces which come into intensive sliding contact with the user's skin, such as portions of electric-shaver heads, barbers' implements, writing tools and other tools or
- 15 mechanically loaded surfaces which are fairly strongly heated during use and which should be easy to clean, such as hot plates and oven walls.

- It is problem to provide such outer layers with markings without the latter causing interruptions in the outer layer, where the protective effect of the outer layer would be absent, or spots of roughness in the outer layer, where dirt can accumulate and which
- 20 adversely affect the sliding properties.

It is an object of the invention to provide a solution to the above problem.

- This object is achieved according to the invention in that the outer layer is
- 25 provided with a marking formed by at least a region of said outer layer of which at least one of said visual properties is different from the corresponding property of other regions of said outer layer, which difference is visible to the human eye.

The invention further relates to an element provided with such an outer layer, and to a method of marking an outer layer comprising a polymer material with an inorganic

main chain and having visual properties, which method comprises the provision of changes visible to the human eye in at least one of said visual properties in at least one region of said outer layer, whereby said at least one region forms a visible marking in said outer layer when viewed frontally.

Since the marking is obtained by means of at least one locally changed visual property of the material of the outer layer itself, the marking does not constitute a substantial interruption in the outer layer, and the provision of the marking does not cause any substantial unevennesses in the outer layer.

Particular embodiments of the invention have been defined in the dependent claims.

Further objects, aspects, effects, advantages, and details of the invention will become apparent in the following description of a few embodiments of the invention, for which reference is made to the drawing, in which

Fig. 1 is a bottom view of a sole of an electric iron,

Fig. 2 is a cross-sectional view on an enlarged scale of a portion of the sole of the electric iron of Fig. 1 which has not been treated for providing a marking,

Fig. 3 is a cross-sectional view on an enlarged scale of a portion of the sole of the electric iron of Fig. 1 which has been treated for the provision of a marking,

Fig. 4 is a diagrammatic picture of a marking as partly shown in Fig. 3,

Fig. 5 is a diagrammatic cross-sectional view of a boundary area of a carrier and a layer of polymer material in an alternative embodiment, and

Fig. 6 is a diagrammatic cross-sectional view of a boundary area of a carrier and a layer of polymer material in a further alternative embodiment.

An example of an element according to the invention is formed by the sole 1 of an electric iron shown in various ways in Figs. 1 to 4.

This sole is built up inter alia from a carrier 2 of metal or a metal alloy which supports an outer layer 3. This outer layer 3 forms a sliding or contact layer 3 of the sole 1. Said outer layer 3 is formed from a polymer material, in this example on the basis of polysilicate which was provided in a sol-gel process. The main chain or backbone of the polymer is inorganic; any lateral chains or branches may be organic, if so desired. The outer

layer 3 is provided with markings in the form of decorative lines 4 and characters 5. The latter may form, for example, a type indication.

The outer layer 3 in which the markings 4, 5 are provided was obtained in that a sol-gel substance was provided on the carrier 2, and the sol-gel substance was subsequently converted into the polymer material with an inorganic main chain of the outer layer 3.

The markings 4, 5 are formed in that visual properties – in this example shade of darkness and color – of regions 9 of the outer layer 3 exhibit a clearly visible difference from the corresponding visual properties of the other regions of the outer layer 3. In this example, the outer layer has a yellow ochre color, whereas the markings are of a darker color and more brownish. Since the markings form part of the outer layer 3, their presence has no substantial negative effect on the sliding properties of the outer layer, the protective effect of the outer layer 3, and the dust-repellent properties of the outer layer 3.

When the markings 4, 5 are provided, changes are applied in the visual properties of the outer layer 3 in those regions of the outer layer 3 which are destined to form the markings 4, 5 in the outer layer when viewed frontally.

Compared with the separate provision of portions of the outer layer 3 with deviating visual properties in the areas of the markings, the above offers the advantage that the provision of the outer layer 3 can be carried out in one step or series of steps. It is further achieved thereby that the markings 4, 5 are formed integrally with other portions of the outer layer 3, so that the screening effect of the outer layer 3 over the surface of the sole 1 remains intact also after a long period of use and a corresponding large number of fast and major temperature changes. As is evident from Fig. 3, the outer layer 3 may be locally very thin, or locally interrupted after treatment. Such a minor local defect in the outer layer 3 does not adversely affect the durability of the outer layer 3.

The changes in the visual properties discussed above are obtained in a very efficient manner through the local supply and absorption of energy in those regions which are to form the markings 4, 5. The supply of energy to the outer layer seems to have the effect that bonds between the polymer chains and lateral branches are broken. Ionization of the chains may also play a part. The result is that at least one visual property of the outer layer changes.

If the element, such as the sliding layer in this example, is designed to transfer heat during operation, and especially if also the energy is supplied in the form of heat, it is important that the results of the local energy supply as regards the speed of the temperature change or the level of the temperature achieved surpass the speed of change or the temperature which occur during normal use.

It is furthermore advantageous for an effective marking if the inorganic main chain of the material of the outer layer has organic lateral branches. These may be made to discolor comparatively easily, while the inorganic main chain is not or hardly affected, so that the mechanical properties of the outer layer are substantially maintained.

If the outer layer is designed to be heated during operation, it is advantageous when the organic lateral branches comprise methyl groups. These may be easily made to discolor by heating on the one hand, while on the other hand they are heat-resistant to such a degree that substantially no discoloration will occur at temperatures prevailing in household applications such as ironing and keeping coffee hot.

The energy transfer may take place, for example, through contact with a heat source or in the form of radiation.

A particularly accurate and efficient treatment may here be achieved if, as in the present example, the energy supply is realized in that the sole 1 is operated upon with a laser beam. A large number of different markings, including very fine patterns, can be provided in that the laser beam is controlled in a suitable manner and/or in that suitable masks are used.

The laser treatment is carried out such that a substantial portion of the laser beam is absorbed by the outer layer 3. The energy released during the absorption of the laser radiation by the outer layer 3 causes changes in the visual properties of the outer layer 3. An advantage of this is that the outer surface 6 of the outer layer 3 remains entirely or substantially in its original condition, and accordingly retains substantially the same properties as the portions of the outer layer 3 situated outside the regions of the markings 4, 5. The outer surface 6 of the outer layer 3 remains sufficiently flat and substantially continuous after the treatment, so that the treated regions will have substantially the same mechanical properties as the non-treated regions.

Favorable results are obtained when a laser beam is used with a wavelength of 800-1600 nm, in particular 1000-1100 nm. It is furthermore advantageous for an efficient utilization of the laser energy when the laser has a wavelength at which the outer layer has a comparatively strong absorption.

To obtain a sharp delineation of the markings 4, 5, it is furthermore advantageous that a sol-gel treatment renders it possible to form a very thin outer layer, for example with thicknesses below 50 μm , or even below 25 or 30 μm . In addition, the outer layer 3 is dull-translucent, which enhances the contrast between markings 4, 5 in the zone of the outer layer 3 adjoining the carrier 2 and surrounding regions of the outer layer 3.

The carrier 2 is manufactured from an aluminum alloy. This is advantageous for the fast removal of heat released during the absorption of the laser radiation, whereby firstly a strong thermal shock effect can be obtained in the outer layer 3, and secondly the effect of released heat remains limited to a small region of the outer layer 3.

To obtain a satisfactory application and adhesion, it is furthermore advantageous that the sol-gel substance from which the outer layer 3 is obtained comprises monomers for the formation of the polymer material and 3-glycidyloxypropyltrimethoxysilane (glymo), the quantity of the 3-glycidyloxypropyltrimethoxysilane being less than 50% by weight of the quantity of the monomers. This effect is particularly apparent if the sol-gel substance comprises an alkoxy silicate as the monomer for the formation of the polymer material.

The laser beam with which the regions for the formation of the markings 4 and 5 are treated is a pulsating laser beam in this embodiment. To obtain a distinct marking without excessive attacks on the outer layer 3, it is advantageous here to carry out the pulsatory irradiation with a pulse duration shorter than 30 ns, and in particular shorter than 20 ns.

There are many alternative possibilities for providing the markings 4, 5, and many alternative products which can be obtained thereby, in addition to the example described above of the manner of providing markings and the product obtained thereby in accordance with the embodiment described above.

Fig. 5 shows an example where the outer layer 23 of inorganic polymer material provided on a carrier 22 comprises fillers in the form of particles 24 which have a visual property in the form of their degree of darkness, which can be influenced by a laser. The particles 24 have a darker hue in a region 29 owing to the action of laser beams, thus forming a marking. The fillers prevent the laser radiation from penetrating deeply into the outer layer 23. As a result, substantially exclusively particles in an outermost zone of the outer layer 23 have been discolored in the region 29 of the marking. It is preferable with the use of colored fillers to choose a wavelength for the laser radiation which does not correspond to or is far removed from the wavelength of the color of the fillers so as to promote the effectivity of the laser irradiation.

The fillers preferably comprise fluorided hydrocarbons. This offers the advantage that the fillers at the same time enhance the gliding properties and the water-repelling action of the outer layer 23.

In another embodiment shown in Fig. 6, the outer layer 43 is built up from several (in this example two) layers 50, 51 of an inorganic polymer material. The outer layer 50 has been removed in the region 49 which forms the marking, so that the layer 51 adjoining the carrier 42 is visible. The two layers 50, 51 have clearly differing visual properties, so that a clear marking in the outer layer 43 is obtained in this manner. The removal of the outer layer 50 may again be carried out by means of a laser, but it may also be realized by alternative, for example mechanical means.

In the case of an outer layer composed of two layers having different visual properties, it is also possible to keep the outermost layer at least substantially intact and to change a subjacent layer visually through an action from the outside, for example in that it is made to melt or made to change its color or degree of darkness. This may be achieved, for example, in that the absorption of the radiation is caused to take place selectively in the layer adjoining the carrier and/or in the carrier, and/or in that the layers are so constructed that the layer adjoining the carrier reacts differently to the external action than does the outermost layer.

The outer layer may in principle be self-supporting or may be provided on a different type of carrier, for example made of glass or ceramic material. Furthermore, the outer layer may be a shaver head or a control panel, or it may serve as an easily cleanable protective layer, for example of a hot plate of a coffee maker, instead of as a sliding layer of, for example, an ironing sole.

In view of the above it will be clear to those skilled in the art that many alternative embodiments may exist and be created in addition to those described above.

CLAIMS:

1. An outer layer comprising a polymer material with an inorganic main chain and having certain visual properties, characterized by a marking (4, 5) formed by at least a region (9; 29; 49) of said outer layer (3; 23; 43) of which at least one of said visual properties is different from the corresponding property of other regions of said outer layer (3; 23; 43),

5 which difference is visible to the human eye.

2. An outer layer as claimed in claim 1, wherein said at least one region (9; 29; 49) forming said marking (4, 5) is substantially integral with other portions of said outer layer (3; 23; 43).

3. An outer layer as claimed in claim 1 or 2, wherein at least one of said visual properties of said at least one region (9; 29; 49) forming said marking (4, 5) is modified through the influence of laser radiation.

4. An outer layer as claimed in any one of the preceding claims, wherein the outer layer (3) is at least dull-translucent.

5. An outer layer as claimed in any one of the preceding claims, formed by a sol-gel process.

6. An outer layer as claimed in any one of the preceding claims, further comprising filler materials (24) with visual properties of which at least one can be changed by means of a laser.

7. An outer layer as claimed in claim 6, further comprising fluorided hydrocarbons.

8. An outer layer as claimed in any one of the preceding claims, comprising at least two layers (50, 51) of polymer material with an inorganic main chain, wherein said at

least two layers are absent, with the exception of at least one layer thereof, in the at least one region (49) which forms said marking.

9. An outer layer as claimed in any one of the preceding claims, wherein said
5 inorganic main chain has organic lateral branches.

10. An outer layer as claimed in claim 9, wherein said organic lateral branches
comprise methyl groups.

11. An element with a carrier structure (2; 22; 42) which support an outer layer (3;
23; 43) as claimed in any one of the preceding claims.

12. An element as claimed in claim 11, wherein the material of the carrier structure
(2; 22; 42) is a hard material of permanent shape, such as a metal or a metal alloy, a ceramic
15 material, a glass, or hard plastic.

13. An element as claimed in claim 12, further comprising an anodized layer which
supports said outer layer (3; 23; 43).

14. An element as claimed in any one of the claims 11 to 13, wherein said outer
layer (3) in said at least one region (9) is substantially unchanged in a zone adjoining an outer
surface of said outer layer (3) as compared with a zone of surrounding areas of said outer layer
(3) which adjoins an outer surface of said outer layer (3).

15. A method of marking an outer layer (3; 23; 43) comprising a polymer material
with an inorganic main chain and having visual properties, which method comprises the
provision of changes visible to the human eye in at least one of said visual properties in at
least one region (9; 29; 49) of said outer layer (3; 23; 43), whereby said at least one region (9;
29; 49) forms a visible marking (4, 5) in said outer layer (3; 23; 43) when viewed frontally.

16. A method as claimed in claim 15, wherein the outer layer (3; 23; 43) in which
said marking (4, 5) is provided was obtained through the application of a sol-gel substance
onto a carrier (2; 22; 42) and through the conversion of said sol-gel substance into said
polymer material with an inorganic main chain.

17. A method as claimed in claim 16, wherein the sol-gel substance comprises an alkoxy silicate as the monomer for the formation of said polymer material.

5 18. A method as claimed in any one of the claims 15 to 17, wherein said changes in at least one of said visual properties are obtained through a local energy supply to said at least one region (9; 29; 49) which forms said marking (4, 5).

19. A method as claimed in claim 18, wherein said local energy supply is provided
10 by a laser beam.

20. A method as claimed in claim 19, wherein a substantial portion of said laser beam penetrates said outer layer (3) and is absorbed by a carrier which supports said outer layer (3).

15 21. A method as claimed in claim 19 or 20, wherein said laser beam is a pulsating laser beam, and wherein the pulsation is carried out with a pulse duration shorter than 30 ns, preferably shorter than 20 ns.

20 22. A method as claimed in claim 19 or 20, wherein said laser beam has a wavelength of between 800 and 1600 nm, preferably between 1000 and 1100 nm.

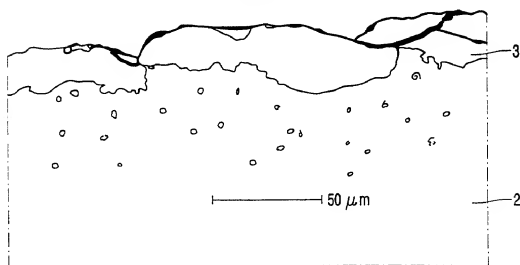
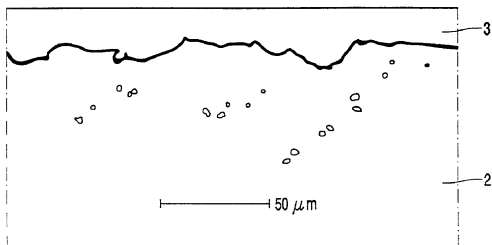
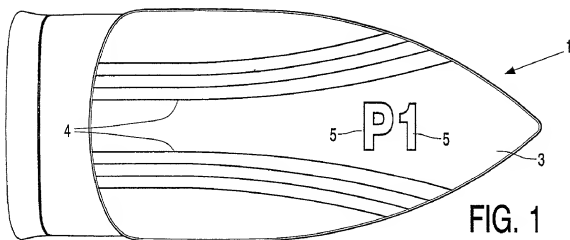
23. A method as claimed in any one of the claims 19 to 21, wherein the laser has a wavelength at which the outer layer shows a comparatively strong absorption.

ABSTRACT:

A marking (4, 5) is formed in an outer layer (3; 23; 43) comprising a polymer material with an inorganic main chain and with certain visual properties by at least one region (9; 29; 49) of the outer layer (3; 23; 43) of which at least one of the visual properties shows a deviation, visible to the human eye, from the same property in other regions (9; 29; 49?) of the outer layer (3; 23; 43). Since the marking (4, 5) is obtained by means of at least a locally changed visual property of material of the outer layer (3; 23; 43) itself, the marking (4, 5) does not constitute a substantial interruption of the outer layer (3; 23; 43), and the application of the marking (4, 5) does not cause any substantial unevennesses in the outer layer (3; 23; 43). The following are further described: an element having such an outer layer (3; 23; 43) and a method of applying such a marking (4, 5).

Fig. 4

1/2



2/2

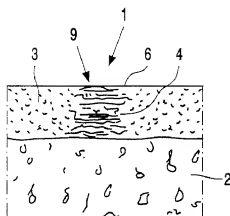


FIG. 4

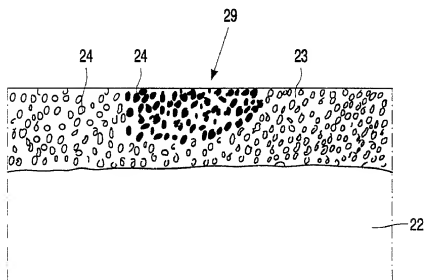


FIG. 5

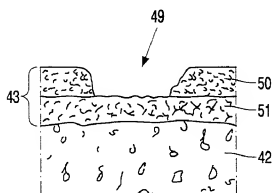


FIG. 6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
KENG KIT YEO

Atty. Docket
PHN 17,710

Filed: **CONCURRENTLY**

OUTER LAYER AND ELEMENT WITH MARKINGS, AND METHOD OF MANUFACTURING SAME

Commissioner for Patents, Washington, D.C. 20231

APPOINTMENT OF ASSOCIATES

Sir:

The undersigned Attorney of Record hereby revokes all prior appointments (if any) of Associate Attorney(s) or Agent(s) in the above-captioned case and appoints:

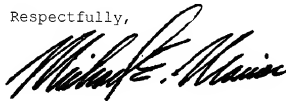
ERNESTINE C. BARTLETT

(Registration No. 22,861)

c/o PHILIPS ELECTRONICS NORTH AMERICA CORPORATION, Corporate Intellectual Property, 580 White Plains Road, Tarrytown, New York 10591, his Associate Attorney(s)/Agent(s) with all the usual powers to prosecute the above-identified application and any division or continuation thereof, to make alterations and amendments therein, and to transact all business in the Patent and Trademark Office connected therewith.

ALL CORRESPONDENCE CONCERNING THIS APPLICATION AND THE LETTERS PATENT WHEN GRANTED SHOULD BE ADDRESSED TO THE UNDERSIGNED ATTORNEY OF RECORD.

Respectfully,



Michael E. Marion, Reg. 32,266
Attorney of Record

Dated at Tarrytown, New York
on June 28, 2001.

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **OUTER LAYER AND ELEMENT WITH MARKINGS, AND METHOD OF**

MANUFACTURING SAME

the specification of which (check only one item below):

☐ is attached hereto.

☐ was filed as United States application

Serial No

on

and was amended

on

☒ was filed as PCT international application

Number PCT/EP00/11005

on 6 November 2000

and was amended under PCT Article 19

on

(if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

COUNTRY	APPLICATION NUMBER	DATE OF FILING DAY, MONTH, YEAR	PRIORITY CLAIMED UNDER 35 USC 119
WO	SG99/00122	11 November 1999	YES

U.S. DEPARTMENT OF COMMERCE - Patent and Trademarks Office
(July 1994)



Combined Declaration For Patent Application and Power of Attorney (Continued)
(includes Reference to PCT International Applications)

Attorneys Docket Number

PHN 17.710 US

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)

Jack E. Haken, Reg. No. 26,902

Michael E. Marion, Reg. 32,266

Edward M. Blocker, Reg. No. 30,245

Direct Telephone Calls to:
(name and telephone number)
(914)332-0222

201	FULL NAME OF INVENTOR	FAMILY NAME	FIRST GIVEN NAME	SECONDE GIVEN NAME
		<u>YEO</u>	<u>Keng</u>	<u>Kit</u>
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP
		<u>Singapore</u>	<u>Republic of Singapore</u> <i>SGX</i>	<u>Republic of Singapore</u>
	POST OFFICE ADDRESS	POST OFFICE ADDRESS	CITY	STATE & ZIP CODE/COUNTRY
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.



SIGNATURE OF INVENTOR 201

DATE 31 May 2001

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(July 1994)